Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Industrie Cartarie Tronchetti UK Limited

Deeside Paper Mill
Unit C The Airfields Roadside and Retail
Northern Gateway
Welsh Road
Queensferry
Deeside
Flintshire
CH5 2RD

Permit number

EPR/DB3292FS

Deeside Paper Mill
Permit number (EPR/DB3292FS)

Introductory note

This introductory note does not form a part of the permit

The Deeside Paper Mill is located on part of the Northern Gateway Industrial area in Deeside, Flintshire. The site covers approximately 31.45 hectares with the Dee Estuary approximately 0.6Km to the south of the site.

The paper mill is operated by Industrie Cartarie Tronchetti UK Limited and this Environmental Permit is for the activities of phase 1 and 2 of the installation. Phase 1 consists of pulp storage, bale handling, paper manufacture hall, jumbo rolls storage, converting area, raw materials storage, high bale warehouse, dispatch, effluent treatment plant, chemical storage, Combined Heat and Power (CHP) plant and boiler. Phase 2 will comprise of pulp storage bale handling, paper manufacture hall, jumbo roll storage and CHP plant and boiler.

All paper will be produced using virgin pulp which will be delivered to site already prepared. Each paper machine will make around 70,000 tonnes per annum (tpa) of tissue. For phase 1 and 2 this will mean a total of 140,000 tpa with the two operational paper machines.

The process at the installation includes:

- **Raw Material Storage** – Bales of cellulose are stored in the pulp storage warehouse prior to use in the production of tissue paper. All chemicals are stored in a dedicated area. Gas and water are supplied from mains through pipeline connections.
- **Pulp Preparation –** Cellulose bales are pulped in the pulper and mixed with water and through mechanical action to produce the pulp stock.
- **Pulp Treatment –** Pulped stock is sent through a series of machines to separate out small debris and clumps. Wastewater is sent to the effluent treatment plant.
- **Formation of tissue paper and winding in reels** – Pulp is sent to the paper machine and placed on a wire and felt and excess water drains away to leave a wet fibre sheet. The sheet is transferred to the drying section by the felt where it is pressed and dried using the Yankee dryer, a cylindrical drum heated by steam and hot air generated by hoods above. This dries the sheet to form tissue which is scraped from the drying cylinder using a steel blade to form a crepe which is wound on reels and wrapped for storage in the jumbo reel warehouse.
- **Multi ply formation** – This converts the jumbo reels into tissue products such as toilet rolls or kitchen towels. The jumbo reels are wound and rewound on a converting machine coupling one or more plies together. Then if required cut to size through circular blades to form the final product which is stored prior to dispatch.

- **Heat and Power Generation –** Each paper manufacturing line consists of a 24.16MWth gas turbine and combustor unit, 15MWth post burner boiler for steam and a 13.6MWth burner on the Yankee hood. Electric heat pumps supply heat to the production hall. There will also be a diesel emergency back-up generator. Any excess electrical energy from the CHP plant will be exported to the national grid or imported where there is an on-site shortfall.
- **Effluent Treatment** – Process effluent is treated on site through in stages that include sedimentation / flotation, oxidation / Moving Bed Biofilm Reactor and filtration. The effluent treatment plant produces a sludge which is dewatered and sent off site. The treated water will discharge at a rate of around 3,456 m^3/day to the Dee Estuary.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Application PAN-021584 (EPR/TBC/A001)	Duly made 24/08/2023	Application for phase 1 and 2 of the Deeside Paper Mill
First Schedule 5 Additional information request PAN-021584	23/10/2023	Schedule 5 Notice
Additional Information Received	27/11/2023	Air Quality Modelling report updated and re-submitted dated 24 November 2024
Second Schedule 5 Additional Information Requested PAN-021584	18/01/2023	Schedule 5 Notice covering boiler blowdown disposal route, medium combustion plant information, options criteria concerning trade effluent discharge.
Additional Information Received	21/02/2024	Site Condition Report V2R2 report and letter dated 19/02/2024 in response to questions posed to Schedule 5 of 18/01/2023
Third Schedule 5 Additional Information Requested PAN-021584	21/02/2024	Schedule 5 Notice submission of final H1 assessment
Additional Information Received	20/03/2024	E-mail with letter of response dated 14/03/2024 and included attachments of H1 assessment phase 1, phase 1 and 2 combined and Marine discharge report.
Additional Information Received	23/05/2024, 24/05/24 & 06/06/2024	E-mail concerning boilers, back-up generator and surface water lagoon, monitoring and emergency backup generator.
Permit determined EPR/DB3292FS/A001	19/06/2024	Permit issued to Industrie Cartarie Tronchetti UK Limited

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number
EPR/DB3292FS

The Natural Resources Body for Wales ("Natural Resources Wales") authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Industrie Cartarie Tronchetti UK Limited ("the operator"),

whose registered office is

Wright Hassall
Olympic Avenue
Leamington Spa
Warwickshire
CV34 6BF

company registration number **11539626**

to operate an installation

Deeside Paper Mill
Unit C The Airfields Roadside and Retail
Northern Gateway
Welsh Road
Queensferry
Deeside
CH5 2RD

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Holly Noble	**19/06/2024**

Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy Efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities.

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of waste produced by the activities

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.2.2 For the following activity, reference A8 in schedule 1, table S1.1, no MCP shall be operated beyond the site of the grid reference specified for it in schedule 1, table S1.1 of the permit.

2.3 Operating techniques

2.3.1 (a) For the following activities referenced in schedule 1, table S1.1 (A1 to A7) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.

(b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.3 For the following activities referenced in schedule 1, table S1.1 (A8) the activities shall be operated using the techniques and, in the manner, described in schedule 1, table S1.2A.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.

2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

3.1.2 The limits given in schedule 3 shall not be exceeded.

3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.1.4 Total annual emissions from the emission point(s) set out in tables schedule 3 S3.2 of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

(a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1 and S3.2

3.5.2 The operator shall maintain records of all monitoring required by this permit [including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme (and the environmental or other monitoring) specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by Natural Resources Wales

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.2.2 For the following activities referenced in schedule 1, table S1.1 (A1 to A7). A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform Natural Resources Wales,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) in the event of a breach of any permit condition the operator must immediately—

(i) inform Natural Resources Wales, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.

4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately" in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
A1	S6.1 A1 (b) Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.	Manufacture of tissue from virgin pulp with a total production capacity of 70,000 tpa	From receipt of raw materials through specified activities to dispatch of finished products. 2 lines 140,000 tonnes per annum (tpa)
A2	S1.1 A(1) (a) burning any fuel in an appliance with a rated thermal input of 50 or more megawatts	Operation of natural gas-fired combustion plant: 2 x 24.16MWth Gas Turbines (GTs) to supply PM1 & 2 2 x 6.8MWth burners to supply heat to the Yankee hood in both phase 1 and 2. 2 x 15MWth boilers to provide steam to the Yankee one in each of the 2 phases. 1.4MWth Emergency back-up diesel generator to power critical systems in case of unexpected shut down <50hrs	Receipt of raw materials and fuel for the production of steam and electricity. Boiler blowdown to effluent treatment plant (ETP) and release of combustion products to air.
A3	S5.4 A1(a)(i) Disposal of non-hazardous waste with the capacity exceeding 50 tonnes per day involving one or more of the following activities (i) biological treatment	Treatment of process effluent from the paper making activity and boiler blow down from the CHP plant to the Dee Estuary.	From receipt of process effluent to the plant for biological treatment to discharge to the Dee Estuary.
Directly Associated Activity			
A4	Chemical storage and handling	Storage and handling of chemicals used in the process	From receipt and storage of chemicals to despatch of wastes.
A5	Surface Water Discharge	Discharge of clean uncontaminated site surface water from roofs, paths and roads	From transfer to the on-site drainage system to the Dee Estuary

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
A6	Raw Material Storage	Storage and handling of raw materials	From receipt and storage of raw materials to despatch of finished product from the installation
A7	Waste Storage and handling	Storage and handling of wastes	From the generation of wastes from the process to the despatch of waste.

Medium Combustion Plant			
Activity reference	**Activity listed in the EP Regulations**	**Description of MCP and/or Specified Generator**	**Limits of specified activity**
A8 NGR: On completion of PO3	Schedule 25A – Medium Combustion Plant as detailed in Schedule 8 and Specified Generator that is excluded. MCPD identifier: On completion of PO3	2 x 24.16MWth Gas Turbines (GTs) 2 x 15MWth boilers to provide steam to the Yankee one in each of the 2 phases. 1.4MWth Emergency back-up diesel generator to power critical systems in case of unexpected shut down(1)<50hrs	From receipt of fuel to release of combustion products to air.

Note 1: Specified Generator excluded from IED Chapter II installation.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	B3 Sections 1a,1b, of the application document in response. Response to section 3a, 3c – technical standards , Part B of the application form Application 'Supporting Information_V2R2 dated 9 March 2023 (JER9156) – Assessment against: Best available techniques (BAT) as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and the council on industrial emissions for the production of pulp, paper and board (2014/687/EU) - Section 2.1 Avoidance, Recovery and Disposal of wastes - Table 2.2 Raw Materials Inventory - Section 3.2.5 Raw Materials Storage Table 3.4 Environmental risk assessment Appendix C - Section 4.2.1 Treatment of process effluent detailed in section 3.2. - Section 4.2.3 Surface water management. 'JER9156 Environmental Risk Assessment 2 13 March 2022' Noise Impact Assessment 21/03/2023 Rev. PO2 Energy Flow diagram phase 1 & 2 , Water Balance ETP and PM phase 1 & 2	21/03/2023
Application Additional Information	Emission point plan entitled 'Environmental Permit Plan' received on e-mail 06/07/2023. Response to question 9 of 'not duly made letter' request for more information regarding containment (response letter dated 06/07/2023).	06/07/2023
Application Additional Information	Site drainage plans including surface water drainage plan, Foul water network, effluent pipe route, road drainage plan phase 1 and 2. Submitted by E-mail attachment.	15/08/2023
Response to Schedule 5 Notice dated 23/10/2023	All including ICT Paper Mill Air Quality Modelling Doc Reference ICT-CDLL-XX-RP-AQ-040 Revision P05 24 November 2023.	27/11/2024
Response to Schedule 5 Notice dated 18/01/2024	Resubmission of 'Site Condition and Baseline Report file name 220328_R_Jer9156_TC_Deeside Paper Mill Site Condition Report_V2R2.docx Dated 13 March 2023'.	20/02/2024
Response to Schedule 5 Notice dated 21/02/2024	Letter of response dated 14/03/2024 confirming discharge volumes to the River Dee for phase 1 and 2 combined.	20/03/2024

Table S1.2A Operating techniques for Medium Combustion Plant as detailed in Schedule 8
Description
Each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this
The operator must keep periods of start-up and shut-down of each MCP as short as possible
There must be no persistent emission of 'dark smoke' as defined in Section 3(1) of The Clean Air Act 1993

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The operator shall submit to Natural Resources Wales a written report on the commissioning of the Deeside paper mill and shall report in accordance with the approved commissioning plan. Also the report shall include but is not limited to: • The environmental performance of the Deeside paper mill and a review against the conditions in the permit; • Any operating techniques or procedures developed and adopted during the commissioning of the Deeside paper mill for achieving and demonstrating compliance; and The report shall outline any improvements and / or modifications identified as part of the commissioning and any timetable for their implementation.	Within 6 months of commissioning
IC2	Following successful commissioning and establishment of routine steady operation, the operator shall undertake a BS 4142:2014+A1:2019 noise impact assessment following guidance set out in *Noise and Vibration Management:* *Environmental Permits* and *Method implementation document (MID) for BS 4142*. Upon completion of the work, a written report shall be submitted to NRW for approval. If the assessment shows a higher impact than specified in the application, further measures need to be considered.	Within 8 months of commissioning
IC3	Operator to review 'Energy Flow diagram phase 1 & 2' and update where necessary following further information to NRW concerning heating of the production halls and emergency backup generator. A copy of the reviewed and updated 'Energy Flow Diagram for phase 1 & 2' shall be submitted to Natural Resources Wales.	Within 6 months of commissioning
IC4	Operator to review and update emission point plan following proposed change from 2 X 1.35MWth gas boilers to supply heat for the production halls (removal of A1 and A2) to 6 x 208kWth electric heat pumps and inclusion of A21 for the 1.4MWth emergency backup generator. Operator to also update operating techniques and submit the revised emission plan to Natural Resources Wales.	Within 6 months of commissioning

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO1	Prior to the operation of the paper mill a written commissioning plan (including timelines for completion) shall be submitted to Natural Resources Wales (NRW) for approval. The commissioning plan shall include but not be restricted to: – The timetable for the commissioning of the effluent treatment plant (ETP), combined heat and power plants (CHP) and paper machines (PM1 & PM2) . – The expected emissions to the environment during each of the stages of commissioning; – The mitigation measures that will be taken in respect of emissions to the environment during each stage; – The expected duration of commissioning activities; – Any additional (beyond that required by the Permit) monitoring to be undertaken; Commissioning shall be carried out in accordance with the commissioning plan as approved.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO2	Prior to the operation of the installation a written Environment Management System (EMS) shall be developed in line with the BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council for the production of Pulp, Paper and Board. The operator is also directed to NRW guidance 'How to comply with your environmental permit in respect of this pre-operational condition and a summary of the EMS shall be submitted to NRW prior to operation. Operator to ensure procedures for dust management in internal areas of the mill are included as only outside operational areas are considered in the sites risk assessment.
PO3	Prior to operation a report shall be submitted to NRW demonstrating that the necessary procedures are in place for the operation of each new medium combustion plant (MCP). The report shall include the MCPD identifier (Identifier - the MCP must be traceable via a serial number or unique identifier, name plate, manufacturer and or/model) response to Schedule 8 Annex1 point 7 for the back-up generator and the National Grid reference (NGR) for each 'MCP' as shown on the emission plan in Schedule 7b (also note IC4).
PO4	Following the completion of the mitigation measures outlined in the noise impact assessment (Receptor B - 2.6m high earth bund with 1.4m high acoustic barrier positioned on top running along the full boundary extent with the WG road. Receptor C a minimum 2.5m high acoustic barrier along the boundary extent with the WG road). A written report shall be submitted to Natural Resources Wales for approval confirming that the mitigation measures have been installed in line with those used in the noise impact assessment modelling.
PO5	Prior to operation a report shall be submitted to NRW demonstrating that the containment systems constructed on site meet the commitment made by the operator to meet CIRIA guidance C736 'Containment systems for the prevention of pollution'. The report shall include but not be limited to: • A CIRIA risk assessment. • Outline where the containment measures have been linked to the sites Environment Management System (EMS). • Demonstration of the installation of 'shut-off' vales on the surface water discharge points to the River Dee. • Operating procedures linked to the EMS for the opening and closing of the shut off vales in the event of an incident/accident on site. • Any differences to the proposed containment measures to the as built measures in place in the final construction of the Deeside paper mill. • Confirmation that the containment measures on site meet CIRIA guidance C736 by a suitable qualified engineer.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Virgin Pulp	-
Natural Gas	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A3 [Note 1] [point A3 on site plan in Schedule 7b]	Trimming Press	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A4 [point A4 on site plan in Schedule 7b]	Dust Removal System 1	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A5 [point A5 on site plan in Schedule 7b]	Dust Removal System 2	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A6 [point A6 on site plan in Schedule 7b]	Dust Removal System 3	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A7 [point A7 on site plan in Schedule 7b]	Dust Removal System 4	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A8 [point A8 on site plan in Schedule 7b]	Dust Removal System 5	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A9 [point A9 on site plan in Schedule 7b]	Dust Removal System 6	Particulates	No limit set	Periodic	Six monthly	BS EN 13284

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A10 [point A10 on site plan in Schedule 7b]	Dust Removal System 7	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A11 [point A11 on site plan in Schedule 7b]	Dust Removal System 8	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A12 [point A12 on site plan in Schedule 7b]	CHP By-pass (PM1)	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	50 mg/Nm^3 Note 2	Periodic (average over one hour)	Annually	BS EN 14792
		Carbon Monoxide	No limit Set Note 2	Periodic (average over one hour)	Annually	BS EN 14181
A13 [point A13 on site plan in Schedule 7b]	CHP Main Stack from Gas Turbine (PM1) Includes exhaust from Yankee hood after the heat recovery system.	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	50 mg/Nm^3 Note 2	Periodic (average over one hour)	Annually	BS EN 14792
		Carbon Monoxide	No limit Set Note 2	Periodic (average over one hour)	Annually	BS EN 14181
A14 [point A14 on site plan in Schedule 7b]	Dust Removal System 9	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A15 [point A15 on site plan in Schedule 7b]	Trimming Silos	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A16 [point A16 on site plan in Schedule 7b]	Dust Removal System 10 Wet Scrubber	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A17 [point A17 on site plan in Schedule 7b]	CHP By-pass (PM2)	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	50 mg/Nm^3 Note 2	Periodic (average over one hour)	Annually	BS EN 14792
		Carbon Monoxide	No limit Set Note 2	Periodic (average over one hour)	Annually	BS EN 14181

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A18 [point A18 on site plan in Schedule 7b]	CHP Main Stack from Gas Turbine (PM2) Includes exhaust from Yankee hood after the heat recovery system.	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	50 mg/Nm^3 Note 2	Periodic (average over one hour)	Annually	BS EN 14792
		Carbon Monoxide	No limit Set Note 2	Periodic (average over one hour)	Annually	BS EN 14181
A19 [point A19 on site plan in Schedule 7b]	Dust Removal System (PM2) Wet Scrubber	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A20 [point A20 on site plan in Schedule 7b]	Trimming Silos	Particulates	No limit set	Periodic	Six monthly	BS EN 13284
A21 (NGR on completion of PO3)	1.4MWth Emergency Backup Diesel Generator <50 hours for monitoring purposes	Oxides of nitrogen (NO and NO_2 expressed as NO_2)	No limit set	None set	Once every 500 hours of operation or once every 3 years whichever comes first	MCERTS BS EN 14792
		Sulphur Dioxide	No limit set	None set	Once every 500 hours of operation or once every 3 years whichever comes first	MCERTS BS EN 13284-1
		Dust	No limit set	None set	Once every 500 hours of operation or once every 3 years whichever comes first	MCERTS BS EN 15058

Note 1: Emission Points A1 and A2 see IC4.

Note 2: Monitoring requirements are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases at a standardised O_2 content of 6 % for solid fuels, 15 % for engines and gas turbines and 3 % all other MCPs

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
W1 (point on site plan in schedule 7b) emission to River Dee	Effluent Treatment Plant	Flow Rate	40 l/s	Instantaneous	Continuous	MCERTS Certified Flow Meter
		Maximum Daily Volume	3456 m^3/day	Maximum	Continuous	MCERTS Certified Flow Meter
		Mean Daily Flow	No limit set	Instantaneous (spot sample)	Continuous	MCERTS Certified Flow Meter
		pH	6-9	Instantaneous (spot sample)	Continuous	MCERTS Approved instrumentation or equivalent
		Temperature	Temperature 30˚C	Maximum	Continuous	Standard Temperature Sensor
		Chemical Oxygen Demand (COD)(1)	No limit set(1)	Spot Sample	Daily	COD: BS ISO 15705
		Biological Oxygen Demand (BOD)	25mg/l	24-hour flow proportional sample	Weekly (once a week)	BS EN 1899-1
		Total Suspended Solids (TSS)	50mg/l(1)	24-hour flow proportional sample	Daily	BS EN 872
		Total Nitrogen as N	No limit set	24-hour flow proportional sample	Weekly (once a week)	BS EN 12260 or BS EN ISO 11905-1
		Total Phosphorus as P	No limit set	24-hour flow proportional sample	Weekly (once a week)	BS EN 15681-1 or BS EN ISO 15681-2
		Adsorbable organically bound halogens (AOX)	No limit set	24-hour flow proportional sample	Once every two months	EN ISO 9562:2004

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
		Priority Hazardous Substances (2)	-	24-hour flow proportional sample	Annually	GCMS analysis at UKAS accredited laboratory
		Individual concentrations of the following metals (total and dissolved) and their compounds: Zn, Cu, Cd, Pb, Hg and Ni	-	24-hour flow proportional sample	Annually	BS EN ISO 15586:2003
W2, W3, W4, W5, W6 (as shown on emission plan 7b)	Clean uncontaminated surface water including roof drainage	Oil and grease	No visible oil and grease	Spot	Daily	Visual check

Note 1: Where in-house analysis is used for compliance a duplicate shall be sent for external analysis (UKAS/ISO17025) at a six-month frequency.

Note 2: Water Framework Directive Priority Hazardous Substances detailed in Schedule 6 – Interpretation.

Table S3.4 Annual limits		
Substance	**Medium**	**Limit (including unit)**
Chemical Oxygen Demand (COD)	Water	1.5 kg/t
Total Suspended Solids (TSS)	Water	0.35 kg/t
Total Nitrogen	Water	0.15 kg/t
Total Phosphorus	Water	0.012 kg/t
Adsorbable organically bound halogens (AOX)	Water	0.05 kg/t

Schedule 4 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1, W2, W3, W4, W5, W6	Quarterly	1 January, 1 July
Paper Sludge Analysis	-	Every 12 months	1 January

Table S4.2: Annual production/treatment

Parameter	Units
-	-

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Oxides of Nitrogen Note 1	Annually	kg/t
Carbon Dioxide Note 1	Annually	kg/t
Biological Oxygen Demand	Annually	kg/t
Chemical Oxygen Demand	Annually	kg/t
Total Suspended Solids (TSS)	Annually	kg/t
Total Nitrogen	Annually	kg/t
Total Phosphorus	Annually	kg/t
Adsorbable Organically Bound Halogens	Annually	kg/t

Note 1: Assessment may be based on actual monitoring or use of emission factors (fuel consumption)

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	19/06/2024
Water and Land	Form water 1 or other form as agreed in writing by Natural Resources Wales	19/06/2024
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	19/06/2024
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	19/06/2024
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	19/06/2024

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	**EPR/DB3292FS**
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment:	
To be notified immediately	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

"accident" means an accident that may result in pollution.

"application" means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

"combined heat and power" (CHP) or Cogeneration means the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

"emissions to land" includes emissions to groundwater.

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"first put into operation" means that the plant must have been fired with its design fuel up to its full load. This can be, but does not have to be, during commissioning.

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"impermeable surface" means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the surface.

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"medium combustion plant" or "MCP" means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

"operating hours" means the time, expressed in hours, during which a combustion plant is operating and discharging emissions into the air, excluding start-up and shut-down periods.

"year" means calendar year ending 31 December.

"Industrial Emissions Directive" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

"*Water Framework Directive*" Priority Hazardous Substances are Anthracene, Brominated diphenyl ether, Cadmium, C10-13 Chloroalkanes, Endosulphan, Hexachlorobenzene, Hexachlorobutadiene, Hexachloro-cyclohexane, Mercury and its compounds, Nonylphenol (4-Nonylphenol), Pentachlorobenzene, Polycyclic aromatic Hydrocarbons (PAHs), Tributyltin compounds (Tributyltin-cation) "year" means calendar year ending 31 December.

The calculation for converting mg/m^3 to kg/t can be found in Annex 1 of the Manufacture of Paper, Pulp and Board Best Available Techniques Reference document (BRef) published on 30th September 2014.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

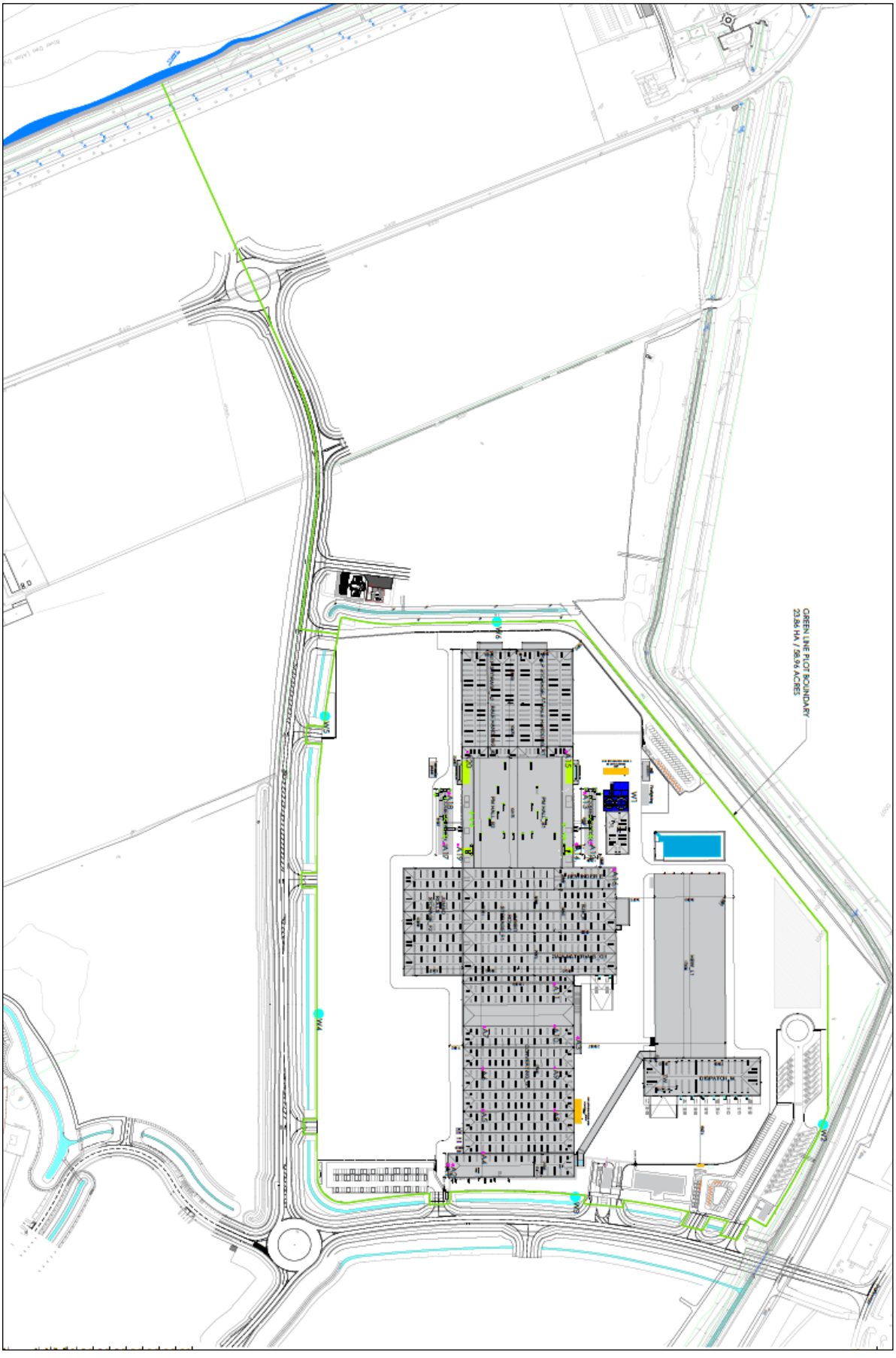
"authorised officer" means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

"background concentration" means such concentration of that substance as is present in:

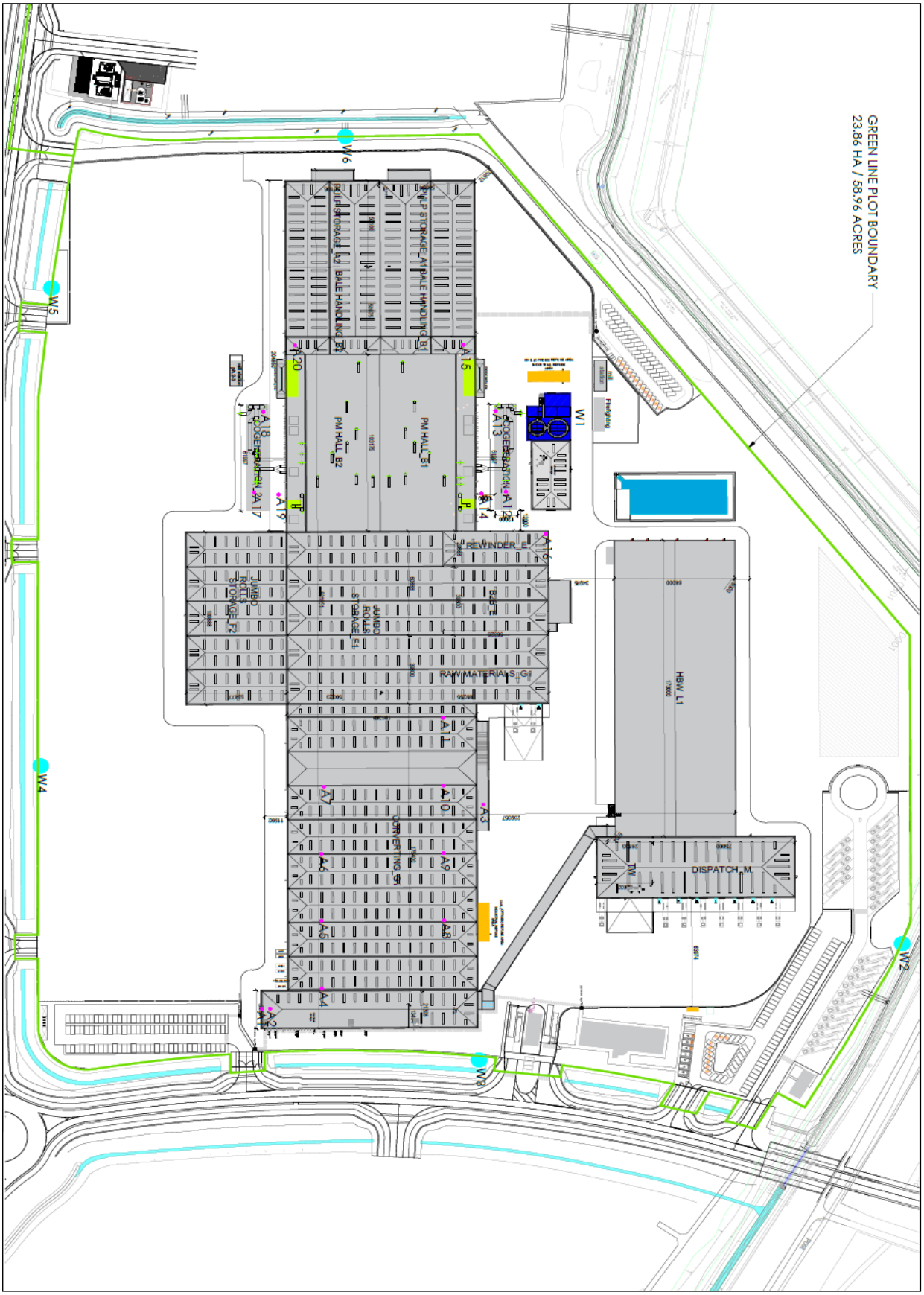
- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

"quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October. Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Schedule 7a - Site plan



Schedule 7b – Emissions Plan



Schedule 8 – Annex 1 of MCPD

1. Rated thermal input (MW) of the medium combustion plant.	24.16MWth CHP for each phase 1 & 2 15MWth boiler to provide steam for each phase 1 & 2 1.4MWth Emergency back-up diesel generator to power critical systems in case of unexpected shut down. (NB / 6.8MWth X 4 burners to supply heat to Yankee Hood for phase 1 & 2 are for direct drying so are out of scope of MCPD) **Total 79.72 MW thermal input**
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Gas fired combined heat and power plants, gas fired boilers and emergency diesel back-up generator.
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	100 % Natural gas except for the emergency backup generator.
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	Unknown, currently not operational Date to be confirmed upon completion of pre-operational condition PO3
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code.	NACE C17.1
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	8500 Hours 100% average load in use
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	On completion of PO3
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	Registered office address: Wright Hassall, Olympic Avenue, Leamington Spa, Warwickshire CV34 6BF MCP Location: Deeside Paper Mill, Unit C The Airfields Roadside and Retail, Northern Gateway, Welsh Road, Queensferry, Deeside CH5 2RD

END OF PERMIT